



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,061	01/15/2004	John A. Moore	1776-0014	5102
7590 06/04/2007				
Magenot, Moore & Beck LLP Chase Tower, Suite 3250 111 Monument Circle Indianapolis, IN 46204-5109				
			EXAMINER COLAN, GIOVANNA B	
			ART UNIT 2162	PAPER NUMBER
			MAIL DATE 06/04/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/758,061

Applicant(s)

MOORE, JOHN A.

Examiner

Giovanna Colan

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-10,12-15 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-10,12-15 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is issued in response to applicant filed request for continued examination (RCE) on 03/09/2007.
2. Claims 1, and 15 have been amended. No claims were added. Claim 2, 11, and 16 were canceled.
3. Claims 1, 3 – 10, 12 – 15, and 17 – 20 are pending in this application.
4. Applicant's arguments with respect to amended claim 1, and 15 have been considered but are moot in view of the new ground(s) of rejection.

Continued Examination Under 37 CFR 1.114

5. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/11/2006 has been entered.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1, 5 – 10, 12 – 15, and 17 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toda et al. (Toda hereinafter) (US Patent No. 2002/0037100 A1, filed: August 20, 2001) in view of BABA et al. (BABA hereinafter) (US Patent Pub. No. 2001/0014172 A1, issued: August 16, 2001).**

Regarding Claim 1, Toda discloses a method for managing image files in a host system comprising:

identifying an image file stored in secondary storage for a host system (Page 8, [0135], lines 5 – 10, Toda);

comparing file metadata for the identified image file to a downgrade threshold (Page 6, [0094], lines 3 – 7, if the number of areas with large coefficients of high-frequency portions ... result is equal to or larger than a threshold value, Toda);

downgrading the identified image file (Page 8, [0135], lines 1 – 5, Toda) in response to the comparison of the file metadata to the downgrade threshold (Page 6, [0096], lines 7 – 9, ... if the sum total is equal to or larger than threshold value m, the parameter "1/2" may be selected ..., Toda);

storing the downgraded file in secondary storage (Page 9, [0142], lines 1 – 3, loaded onto the RAM, Toda).

Toda also discloses storing image file in tertiary storage of the host system (Fig. 28, item 2804, Page 8, [0135], lines 4 – 10, external storage device, Toda). However, Toda does not explicitly disclose: storing the identified image file in tertiary storage of the host system, tertiary storage of the host system having an access time that is greater than the access time for the secondary storage of the host system. On the other hand, BABA discloses storing the identified image file in tertiary storage of the host system, tertiary storage of the host system having an access time that is greater than the access time for the secondary storage of the host system (Page 7, [0102], lines 9 – 15, BABA).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the BABA's teachings to the system Toda. Skilled artisan would have been motivated to do so, as suggested by BABA (BABA), to provide an image data conversion method whereby image data of images recorded on a holographic stereogram can be generated speedily from plural images from which has originated the holographic stereogram; and to reduce the time since the entry of the images from which the holographic stereogram is derived until completion of holographic stereogram. In addition, both of the references (Toda and BABA) teach features that are directed to analogous art and they are directed to the same field of endeavor, such as, databases management systems, downgrading image files, storing downgraded file in the secondary storage of the host system, and storing image file in

Art Unit: 2162

tertiary storage. This close relation between both of the references highly suggests an expectation of success.

Regarding Claim 5, the combination of Toda in view of BABA discloses a method, the downgrading of the identified image file further comprising:

reducing resolution of the identified image file to generate the downgraded file (Page 1, [0006], lines 14 – 19, ... resolution conversion means for generating reduced non-text multi-valued image data by lowering a resolution of the non-text multivalued image data ..., Toda).

Regarding Claim 6, the combination of Toda in view of BABA discloses a method, the downgrading of the identified image file further comprising:

reducing pixel size in the identified image file to generate the downgraded file (Page 4, [0063], lines 6 – 9, ... black pixels corresponding to change portions from background to characters ... by a scanner are reduced to generate a new binary image "newbi" ...,Toda).

Regarding Claim 7, the combination of Toda in view of BABA discloses a method, the downgrading of the identified image file further comprising:

converting a color image from one color format to another color format that requires less data to represent color in the identified image file to generate the

Art Unit: 2162

downgraded file (Page 9, [0150], lines 2 – 5, ... color data may be converted from an RGB format into an LAB or YcrCb format ..., Toda).

Regarding Claim 8, the combination of Toda in view of BABA discloses a method, the downgrading of the identified image file further comprising:

converting a color image to a color palette version of the color image to generate the downgraded file (Page 1, [0007], lines 10 – 17, ... color palette generation means for generating at least one color palette as the representative color data ..., Toda).

Regarding Claim 9, the combination of Toda in view of BABA discloses a method, the downgrading of the identified image file further comprising:

combining a plurality of downgrade operations to reduce the size of the identified image file to generate the downgraded file (Page 8, [0135], lines 3 – 5, image compression process using programs, Toda).

Regarding Claim 10, the combination of Toda in view of BABA discloses a method, the downgrading of the identified image file further comprising:

retrieving a full resolution version of the identified image file from tertiary storage (Fig. 1, items 100, 104, and 105, Page 3, [0049], lines 15 – 16, Toda¹); and

¹ Wherein the image A (before reduction) corresponds to the full resolution version of the identified image file claimed.

performing a downgrade operation on the full resolution version of the identified image file to generate the downgraded file (Fig. 1, items 105, and 106, Page 3, [0049] and [0053], lines 15 – 16 and 1 – 3, lower its resolution; respectively, Toda).

Regarding Claim 12, the combination of Toda in view of BABA discloses a method, the comparison of the file metadata to the downgrade threshold including:

comparing file metadata to a file access frequency threshold (Page 4 and 6, [0064] and [0094], lines 2 – 5 and 1 – 7; respectively, Toda).

Regarding Claim 13, the combination of Toda in view of BABA discloses a method, the comparison of the file metadata to the downgrade threshold including:

comparing file metadata to a last access time threshold (Page 4 and 6, [0064] and [0094], lines 2 – 5 and 1 – 7; respectively, Toda; and Page 7, [0102], lines 9 – 15, BABA).

Regarding Claim 14, the combination of Toda in view of BABA discloses a method, the comparison of the file metadata to the downgrade threshold including:

comparing file metadata to a classification threshold (Page 5, [0087] and [0089], lines 8 – 10 and 11 – 16; respectively, Toda²).

² Wherein the step which binarizes a pixel to black or to white if the absolute value exceeds or not a threshold value corresponds to the step of comparing as claimed; and the threshold value corresponds to the classification threshold as claimed.

Regarding Claim 15, the combination of Toda in view of BABA discloses a system for managing image files in a host system comprising:

a file data volume for storing file metadata (Page 3, and 9, [0056], and [0142], lines 1 – 5, and 12 – 14; respectively, Toda) that corresponds to image file stored in a secondary storage for a host system (Page 8, [0135], lines 5 – 10, Toda);

a file selector for retrieving file metadata from the file data volume (Page 5, [0087], lines 1 – 8, Toda) and comparing the retrieved metadata to at least one downgrade threshold to identify an image file stored in the secondary storage of the host system for downgrading (Page 6, [0094], lines 3 – 7, if the number of areas with large coefficients of high-frequency portions ... result is equal to or larger than a threshold value, Toda); and

a file reducer for downgrading the identified image file (Page 8, [0135], lines 5 – 7, image compression process, Toda); and

a file controller for generating file metadata for storage in the file data volume (Page 5, [0087], lines 1 – 8, Toda) and for storing the downgraded file in the secondary storage of the host storage system (Page 9, [0142], lines 1 – 3, loaded onto the RAM, Toda) and for storing the identified image file in tertiary storage of the host system, tertiary storage of the host system having an access time that is greater than the access time for the secondary storage of the host system (Fig. 28, item 2804, Page 8, [0135], lines 4 – 10, external storage device, Toda; and Page 7, [0102], lines 9 – 15, BABA).

Regarding Claim 17, the combination of Toda in view of BABA discloses a system wherein the file reducer includes a compressor for compressing the identified image file (Page 3, [0049], lines 17 – 19, compression unit, Toda).

Regarding Claim 18, the combination of Toda in view of BABA discloses a system wherein the file reducer includes a color reducer for converting a color image from one color format to another color format that uses less data to represent color (Page 3, and 9, [0049] and [0150], lines 15 – 19 and 2 – 5; respectively, reduction unit, Toda).

Regarding Claim 19, the combination of Toda in view of BABA discloses a system wherein the file reducer includes an image resolution reducer for reducing resolution of the identified image file (Page 6, [0093], lines 1 – 6, Toda).

Regarding Claim 20, the combination of Toda in view of BABA discloses a system wherein the file reducer includes a pixel size reducer for reducing a number of bits to represent a pixel in the identified image file (Page 6, [0103], and [0106], lines 1 – 3 and 3 – 6, color reducer; respectively, Toda).

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toda et al. (Toda hereinafter) (US Patent No. 2002/0037100 A1, filed: August 20, 2001), in view of BABA et al. (BABA hereinafter) (US Patent Pub. No. 2001/0014172 A1,

issued: August 16, 2001), and further in view of Gleicher et al. (Gleicher hereinafter) (US Patent No. 5,218,431, issued: June 8, 1993).

Regarding Claim 3, the combination of Toda in view of BABA discloses all the limitations as disclosed above including downgrading an image file (Page 8, [0135], lines 1 – 5, Toda). However, the combination of Toda in view of BABA is silent with respect to lossless compression. On the other hand, Gleicher discloses a system and method that performs a lossless compression on the identified image file (Col. 4, lines 52 – 57, Gleicher). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the Gleicher's teachings to the system of the combination of Toda in view of BABA. Skilled artisan would have been motivated to do so, as suggested by Gleicher (Col. 4, lines 52 – 57, Gleicher), to provide a method such that original image can be reconstructed exactly, with no loss of information, on the same computer that compressed it or on a smaller scientific or engineering workstation. In addition, the applied references (Toda, BABA, and Gleicher) teach features that are directed to analogous art and they are directed to the same field of endeavor, such as, databases management systems, image compression, and downgrading images. This close relation between the applied references highly suggests an expectation of success.

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toda et al. (Toda hereinafter) (US Patent No. 2002/0037100 A1, filed: August 20, 2001),

Art Unit: 2162

in view of BABA et al. (BABA hereinafter) (US Patent Pub. No. 2001/0014172 A1, issued: August 16, 2001), and further in view of Bryniarski et al. (Bryniarski hereinafter) (US Patent No. 5,974,182, issued: October 26, 1999).

Regarding Claim 4, the combination of Toda in view of BABA discloses all the limitations as disclosed above including downgrading an image file (Page 8, [0135], lines 1 – 5, Toda). However, the combination of Toda in view of BABA is silent with respect to lossy compression. On the other hand, Bryniarski discloses a system and method that performs a lossy compression on the identified image file (Col. 2, lines 62 – 65, Bryniarski). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the Bryniarski's teachings to the system of the combination of Toda in view of BABA. Skilled artisan would have been motivated to do so, as suggested by Bryniarski (Col. 1, lines 29 – 32, Bryniarski), to provide a higher compression rate without visible degradation in an image, by taken advantage of the human visual system threshold. In addition, the applied references (Toda, BABA, and Bryniarski) teach features that are directed to analogous art and they are directed to the same field of endeavor, such as, databases management systems, image compression, and downgrading images. This close relation between the applied references highly suggests an expectation of success.

Prior Art Made Of Record

1. Toda et al. (US Patent No. 2002/0037100 A1, filed: August 20, 2001) discloses image processing apparatus and method.
2. Gleicher et al. (Gleicher hereinafter) (US Patent No. 5,218,431, issued: June 8, 1993) discloses a raster image lossless compression and decompression with dynamic color lookup and two dimensional area encoding.
3. Bryniarski et al. (US Patent No. 5,974,182, issued: October 26, 1999) discloses a photographic image compression method and system.
4. Sitka (US Patent No. 6,330,572 B1, issued: December 11, 2001) discloses a hierarchical data storage management.
5. Hill (US Patent No. 7,020,658 B1, filed June 4, 2001).
6. BABA et al. (US Patent Pub. No. 2001/0014172 A1, issued: August 16, 2001).

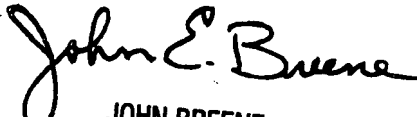
Points Of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Giovanna Colan whose telephone number is (571) 272-2752. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Giovanna Colan
Examiner
Art Unit 2162
May 26, 2007


JOHN BREENE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2162